



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,567	12/05/2003	Tomoyuki Ichikawa	Q78637	7986

23373 7590 03/25/2005

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

NGUYEN, TUYEN T

ART UNIT PAPER NUMBER

2832

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/727,567

Applicant(s)

ICHIKAWA ET AL.

Examiner

TUYEN T. NGUYEN

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/5/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dadafshar [US 6,420,953] in view of Six et al. [US 2,220,126]

Dadafshar discloses a transformer [figures 5-11] comprising:

- a core structure formed of a plurality of core elements[510, 520] having a central projection and two outer leg portions;
 - at least one coil disposed around the central projection, wherein the coil form of a plurality of flat conductors having end portions and a ring-like portion, the end portions forming leading terminals of the coil;
 - gap formed between the core elements.
- wherein the core elements sandwiching the coil therebetween.

Dadafshar discloses the instant claimed invention except for the coil are positioned except a position that surround the gap.

Six et al. discloses an induction device comprising:

- a pot core type including core elements [1, 3, 4] with gap [5] formed therebetween and a projection element [1]; and

Art Unit: 2832

- a coil [2] disposed in the projection element of the core, wherein the coil disposed at positions except a position that surround the gap.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to arrange the coil at positions except a position that surrounds the gap in Dadafshar, as suggested by Six et al., for the purpose of controlling the magnetic flux of the device.

Regarding claim 3, the specific dimension between the leading terminals of the windings would have been an obvious design consideration for the purpose of controlling the inductance.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dadafshar in view of Six et al. as applied to claim 1 above, and further in view of JP 2973514 B2.

Dadafshar in view of Six et al. discloses the instant claimed invention except for inclined surfaces formed in the projection element.

JP 2973514 B2 discloses a transformer comprising a core structure including a central projection element [2] having inclined surface [5].

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include inclined surfaces in the projection element of Dadafshar, as modified, as suggested by JP 2973514 B2, for the purpose of reducing leakage magnetic flux.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Bloom [US 5,726,615]; Wester et al. [US 6,114,932] and Gottschalt [US 3,855,561].

Art Unit: 2832

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T. NGUYEN whose telephone number is 571-272-1996. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTN *TTN*

Tuyen T. Nguyen